

Costs of Motor Vehicle Crashes to Employers:

Latest Available Estimates and Key Findings™



Costs by
State



Costs by
Industry



Costs by
Risk Factors

- Non-seat Belt Use
- Alcohol Use
- Distracted Driving
- Speeding

Costs of Motor Vehicle Crashes to Employers: Latest Available Estimates and Key Findings™

Acknowledgments

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About NETS

The Network of Employers for Traffic Safety
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NETS is a 501(c)(3) organization, a partnership between the U.S. Federal government and the private sector. Established in 1991, NETS is dedicated to improving the safety of employees, their families, and members of the communities in which they live and work by preventing traffic crashes that occur both on and off the job. Board member-companies include Acertus, Chubb, Cintas, ConEdison, Inc., Johnson & Johnson, Lockton, State Farm, Toyota Motor North America, and US Infrastructure Company (USIC). In addition, the National Highway Traffic Safety Administration (NHTSA) and the National Institute for Occupational Safety and Health (NIOSH) serve as federal liaisons to the board of directors.

NETS is a member of the United Nations Road Safety Collaboration, which provides guidance to the Second Decade of Action for Road Safety 2021-2030 global initiative.

Introduction

This report is intended for employers who want to understand the costs of motor vehicle crashes affecting their organizations, including those incurred by occupational fleets as well as on- and off-the-job crashes involving employees and their dependents. Understanding these costs can help employers evaluate the financial impact of crashes and support investment in effective road safety programs.

How to Interpret This Report

This report presents estimates of the financial impact of motor vehicle crashes on employers. The cost estimates include crashes that occur both on-the-job (while employees are engaged in work-related driving) and off-the-job (including crashes involving employees and their dependents outside of work). While employers have more direct influence over on-the-job driving, off-the-job crashes also contribute significantly to employer costs, particularly through health-related benefits and lost productivity.

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The report reflects the **total cost burden associated with motor vehicle crashes**, regardless of fault. In practice, not all crashes included in these estimates are preventable by employers, as some involve circumstances outside of an employer's control. However, the findings highlight the scale of costs that may be reduced through comprehensive safety strategies, including policies, training, and employee outreach that address both occupational and non-occupational driving risks.

Tables presenting costs associated with specific risk factors (such as alcohol use, seat belt non-use, distracted driving, and speeding) focus on crashes in which these behaviors were present. These estimates are intended to illustrate the potential impact of addressing key risk factors through targeted safety interventions.

The estimates provided in this report are based on national data sources and established methodologies. They are designed to offer directional insight for employers rather than precise predictions for any individual organization.

Employers can use these estimates to prioritize safety interventions, benchmark cost exposure, and support business cases for investment in road safety.

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Summary

Methods

This report synthesizes data from multiple national sources, including federal crash databases, labor statistics, and insurance data, to estimate the number and cost of motor vehicle crash injuries affecting employers. Detailed methods, including incidence estimation and cost calculations, are provided in the Appendix and in previously published research cited in this report.

Data sources included (see Reference section at the end of this report for specific resources):

- 2019-2024 NHTSA Fatality Analysis Reporting System (FARS);
- 2018 Insurance Services Office summary data;
- *The Insurance Fact Book, 2021*;
- Highway Statistics 2022;
- The 2022 National Household Travel Survey;
- The 2022 Census of Fatal Occupational Injuries (CFOI)
- The 2021-2022 Survey of Occupational Injury and Illness (SOII);
- *Traffic Safety Facts, 2023-2024*;
- State annual crash statistical reports;
- Blincoc et al. (2023); and
- Zaloshnja and Miller (2006)

The incidence data reflect 2022–2023, the most recent period available at the time of analysis. The costs, however, are expressed in 2024 dollars, the most recent final prices available. Employer crash costs were adjusted to specific states using ratios of state-to-national costs. Medical and composite-item state price adjusters were calculated from the Council for Community and Economic Research (CCER) Cost of Living Index. A wage adjustment factor was calculated from estimates of personal income per capita by state from the 2023 American Community Survey.

Report Overview

This report updates the national estimates of employer costs of crashes presented in NETS' previous report, *The Cost of Motor Vehicle Crashes to Employers – 2019™*, to reflect 2022-2023 data expressed in 2024 dollars. Like the earlier edition, it provides motor vehicle injury costs to employers on a national, state-by-state and industry basis.

Employers incur costs for crashes that occur both on- and off-the-job. Based on an analysis of the Fatality Analysis Reporting System (FARS) and Census of Fatal Occupational Injuries (CFOI) data, it was determined that in 2023, motor vehicle crashes killed 1,877 people and injured 155,000 while they were working (Table 1).

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More than half of the injuries forced people to miss work. Overall, on-the-job crash injuries (fatal and nonfatal) amounted to 7 percent of all crash injuries on public roads.

The analysis shows that motor vehicle crash injuries on- and off-the-job cost employers **\$62 billion** in 2023 (Table 2). Of this cost, **43 percent** resulted from off-the-job injuries to workers and their dependents. The remainder resulted from on-the-job crashes.

Health-related fringe benefit costs and non-fringe costs are described in more detail below. As an overview, non-fringe costs, including property damage, workplace disruption, and liability accounted for **\$34 billion** of the total costs in 2023. The remaining **\$28 billion** were health-related fringe benefit payments including sick leave, health insurance and insurance covering work losses. These fringe benefit payments were split roughly 40:60 between health care (medical) expenses and wage replacement (e.g., through sick leave and life insurance). Of these fringe benefit costs, off-the-job crash injuries totaled \$24 billion, accounting for 87 percent of the health-related fringe benefit bill.

This report also includes total costs for motor vehicle crashes related to seat belt use, alcohol-use, distracted driving, and speeding. In 2023, the total employer cost (both on-the-job and off-the-job) of motor vehicle crashes where at least one driver was alcohol-impaired was \$12 billion; injuries to those who were not wearing their seat belt cost employers \$6 billion; distracted driving cost employers **\$16 billion**; and speeding cost employers **\$7 billion**. Unrestrained crash injuries in 2022 for on-the-job employees cost employers approximately \$650 million in fringe benefit costs, while \$4.0 billion in fringe benefit costs resulted from crash injuries to unrestrained employees and their benefit-eligible dependents off-the-job.

Employer costs of motor vehicle crash injuries varied widely by state and industry. These costs exceeded \$4.8 billion in each of the nation's three most populous states—California, Florida, and Texas. Costs per employee were highest in the transit; trucking; waste management; and stone, clay, glass, and concrete manufacturing industries. When comparing costs between states and industries, note that differences in injury severity, the age of the workforce, regional and local characteristics, and the completeness of reporting play a significant role in the variance.

Prevention is critical to control health care costs arising from injuries. This report demonstrates that by increasing restraint use and reducing alcohol-impaired driving, speeding and distracted driving, employers can greatly reduce health care costs related to motor vehicle crashes.

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Report Conclusions

Employers pay for crashes that happen both on- and off-the-job. Implementing fleet safety programs not only protects employees but can also be a profitable investment of time and resources by helping employers control costs and making roads safer for everyone. In addition, fleet safety programs can reduce health care expenses to employers without reducing the benefits offered to employees. The information in this report can be used to develop a business case to justify investments in a road safety program for occupational fleet drivers and all employees.

What Do Motor Vehicle Crashes Cost?

Incidence counts in this report are from 2022-2023, which are the latest available. The costs, however, are expressed in 2024 dollars, the most recent final prices available at the time of analysis.

Total Costs to Employers by State and Industry

This report provides motor vehicle injury costs to employers on a national, state-by-state, and industry basis. It excludes active-duty military personnel.

Costs Covered by Employers

Employer costs resulting from motor vehicle crashes are grouped into two primary categories:

Health-Related Fringe Benefit Costs

These include employer-paid benefits associated with injury or fatality, such as:

- Health insurance and medical expenses
- Workers' compensation (medical and disability)
- Sick leave and wage replacement
- Life and disability insurance
- Social Security disability contributions
- Insurance administration and overhead

Non-Fringe Costs

These include direct and indirect costs to employers beyond employee benefits, such as:

- Vehicle and property damage
- Liability insurance and legal expenses
- Unreimbursed vehicle repair and replacement
- Workplace disruption and lost productivity
- Recruiting and training replacement workers
- Employer contributions (through taxes) to emergency response services

Together, these categories represent the total estimated financial impact of crashes on employers.

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Employer Costs Extend Beyond the Company Door

Employers pay for injuries that occur to their employees and their dependents both on- and off-the-job. Employers also pay for injuries of non-employees that occurred in work-related crashes (crashes involving a vehicle on employer business but excluding crashes during commuting). An analysis of FARS, Crash Reporting Sampling System (CRSS), CFOI, and Statistics' Survey of Occupational Injury and Illness (SOII) data showed that in 2023, motor vehicle crashes killed 1,877 people and injured an estimated 155,000 while they were working. As Table 1 shows, more than half of the injuries resulting from work-related motor vehicle crashes in 2023 forced people to miss work. Overall, on-the-job crash injuries (fatal and nonfatal) amounted to about 7 percent of all crash injuries on public roads. On-the-job drivers also were involved in 930,000 crashes without injuries.

Some on-the-job incidents did not occur on public roads. This report includes those incidents since countermeasures and corporate safety management systems apply to both on-road and off-road incidents. CFOI also does not differentiate worker pedestrian deaths on and off public roads.

The economic costs of U.S. highway crashes in 2023, excluding the cost imposed on society by congestion and wage-risk premiums, were \$350 billion (Blincoe et al., 2023, inflated to 2024 dollars and adjusted for changes from 2019 to 2023 in fatal and injury crash counts). Employers paid **17 percent** of these costs. They shared the costs of highway crashes with government, private passenger vehicle insurers, and individual crash victims.

Table 1. Annual Number of Fatalities and Injuries of Workers, Their Dependents, and Bystanders Resulting from Motor Vehicle Crashes During 2023*				
Severity	On-the-job*	Injuries		
		Bystander in Work-Related At-Fault Crash**	Off-the-job	All
Fatal	1,877	4,802	29,291	35,970
Nonfatal	154,702	308,514	1,761,891	2,225,107
Lost Work Day	81,987	163,503	933,747	1,179,237
No Lost Work Days	72,715	145,011	828,144	1,045,870
TOTAL	156,579	313,316	1,791,177	2,261,072
* Includes 16,746 on-the-job crash injuries and 284 deaths that did not occur on public roads such as the driver of a forklift that rolled over in a warehouse or a worker hit by a refuse truck at a landfill. Excludes off-road crashes involving active-duty military personnel.				
** For example, a pedestrian or recreational driver hit by a heavy truck.				

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Including off-road crashes, motor vehicle crashes on- and off-the-job cost employers **\$62 billion** in 2023 (Table 2). That total included \$28 billion of health-related fringe benefit costs and \$34 billion of non-fringe costs. Of this total, 43 percent resulted from off-the-job injuries to workers and their dependents. Crashes involving property damage only (i.e., with no one injured or killed) accounted for \$7 billion of the costs.

Table 2. Cost of Motor Vehicle Crashes to Employers* (in millions of 2024 dollars)			
	On-the-job	Off-the-job	All
Health-Related Fringe Benefit Costs	3,747	24,290	28,037
Non-Fringe Costs	31,560	2,074	33,634
TOTAL	35,307	26,364	61,671
* Includes \$7,091 million for crashes involving property damage only.			

Employer Health-Related Fringe Benefit Spending

Motor vehicle crashes cost employers **\$28 billion** in health-related fringe benefits in 2023 (Table 3). Of the fringe benefit payments, 42% were for health care (medical) expenses and 58% were for wage replacement (e.g., through sick leave and life insurance).

Table 3 illustrates the importance of employers reducing off-the-job injuries to achieve health-related cost savings. Off-the-job crash injuries cost **\$24 billion**, or **87 percent** of motor vehicle crash health-related fringe benefit costs.

Table 3. Health-related Fringe Benefit Costs to Employers from Motor Vehicle Crashes (in millions of 2024 dollars)			
	On-the-job	Crash Injuries Off-the-job	All
Workers Compensation	2,417	0	2,417
Medical	1,124	0	1,124
Disability	1,293	0	1,293
Health Insurance & Self Pay	98	9,926	10,024
Disability Insurance	0	359	359
Life Insurance	78	1,225	1,303
Insurance Administration	288	1,250	1,538
Insurance Overhead	15	150	165
Social Security	91	1,214	1,305
Sick Leave	760	10,166	10,926
TOTAL	3,747	24,290	28,037
Source: See Methods and References section.			

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Fleet Safety Programs Can Produce Savings

Employer costs per on-the-job crash, per on-the-job crash injury, and per million vehicle-miles of travel enable employers to estimate their injury burden and the potential savings of fleet safety programs. These unit costs are averages calculated from total costs and actual incidence. Employers can estimate their cost burden by multiplying the costs in Table 4 by their total crashes, crash injuries or millions of vehicle-miles of travel. For example, the estimated cost of on-the-job crashes (which includes property-damage-only, injury, and fatal crashes) for a company that had 1000 such crashes would be $1000 \times \$55,772 = \$55,772,000$.

On-the-job highway crashes cost employers an average of:

- **\$55,772 per crash,**
- **\$59,745 per million vehicle-miles of travel (M VMT), and**
- **\$180,199 per fatal or nonfatal injury.**

The average liability costs per on-the-job crash injury are substantially higher than the health-related fringe benefit and other non-fringe costs. This differential exists because when a large truck or other heavy commercial vehicles collides with a lighter-weight passenger vehicle, the people in the passenger vehicle are much more likely than the heavier vehicle to be killed or severely injured.

NETS annual benchmark report analysis shows that fleet safety elements effective in reducing losses associated with motor vehicle crashes include such practices as top-level management commitment to traffic safety programs; identifying and addressing high-risk drivers; mandatory seat-belt restraint policies; addressing fatigue in fleets; and safety outreach that extends safety efforts beyond the company door. Further information on implementing or advancing a fleet safety program can be found in NETS' Comprehensive Guide to Road Safety™ and is available free of charge as a download at www.trafficsafety.org. The guide has global applicability and is for employers of large or small fleets of all vehicle types with new, developing, or advanced road safety programs.

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Table 4. Costs to Employers per Million Vehicle-Miles of Travel (M VMT) and Costs per On-the-Job Highway Crash and Injury (in 2024 dollars)						
	Per M VMT	Per On-the-Job Crash*	Per PDO Crash	Per On-the-Job Injury**	Per On-the-Job Fatality	Per Nonfatal On-the-Job Injury
Health-Related Fringe Benefit Costs	5,989	4,813	0	23,929	558,988	17,437
Other Non-Fringe Costs	22,214	18,999	7,624	51,330	256,637	48,839
Liability for Losses by Others	31,542	31,960	4,170	104,940	111,651	104,859
TOTAL	59,745	55,772	11,794	180,199	927,276	171,135
* Includes property damage only, injury, and fatal crashes.						
** Includes both fatal and nonfatal injuries.						

Tables 5 and 6 show what safety belt non-use cost employers. Belt non-use by on-the-job employees cost employers \$1.1 billion in 2023. Off-the-job restraint non-use by employees and their benefit-eligible dependents cost employers \$5.2 billion. Costs per employee injured or killed in a crash on the job averaged \$33,510 for those unrestrained, far exceeding the \$15,480 cost if restrained. The comparable figures for crashes off the job – where employers are not liable for costs incurred by people injured by their employees or for most permanent disability of their employees—are much lower: \$7,900 versus \$5,790.

Table 5. Costs to Employers of Safety Belt Non-Use in 2023 (in millions of 2024 dollars)			
	Highway Crash		
	On-the-job	Off-the-job	All
Health-Related Fringe Benefit Costs	638	4,040	4,679
Non-Fringe Costs	459	1,161	1,619
TOTAL	1,097	5,201	6,298

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Table 6. Costs to Employers per Occupant Injured or Killed in a Crash, by Restraint Use (in 2024 dollars)				
	On-the-job		Off-the-job	
	Unrestrained	Restrained	Unrestrained	Restrained
Health-Related Fringe Benefit Costs	19,500	10,590	6,140	4,740
Non-Fringe Costs	14,010	4,890	1,760	1,050
TOTAL	33,510	15,480	7,900	5,790

In 2023, only 1.6 percent of alcohol-involved drivers in fatal crashes were on the job. The total employer cost (both on-the-job and off-the-job) of motor vehicle crashes with an alcohol-impaired employee or dependent driving was \$11.7 billion (Table 7). Out of this, \$10.5 billion came from off-the-job alcohol involvement.

Table 7. Costs to Employers of Alcohol-Involved Motor Vehicle Crashes in 2023 (in millions of 2024 dollars)			
	Highway Crash		
	On-the-job	Off-the-job	All
Health-Related Fringe Benefit Costs	319	6,055	6,375
Non-Fringe Costs	904	4,402	5,306
TOTAL	1,223	10,457	11,681

The employer cost of distracted driver crashes was \$16 billion in 2023 (Table 8). One-quarter of the costs resulted from crashes involving employees and their benefit-eligible dependents while off-the-job.

Table 8. Costs to Employers of Distracted Driving Crashes in 2023 (in millions of 2024 dollars)			
	Highway Crash		
	On-the-job	Off-the-job	All
Health-Related Fringe Benefit Costs	1,421	3,433	4,854
Non-Fringe Costs	10,197	1,112	11,309
TOTAL	11,618	4,545	16,163

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Speed-related crashes cost employers \$7 billion in 2023 (Table 9). The large majority of costs resulted from off-the-job crashes.

Table 9. Costs to Employers of Speed-Related Motor Vehicle Crashes in 2023 (in millions of 2024 dollars)			
	Highway Crash		
	On-the-job	Off-the-job	All
Health-Related Fringe Benefit Costs	361	3,668	4,029
Non-Fringe Costs	1,424	1,230	2,654
TOTAL	1,785	4,898	6,683

The following risk behaviors contribute to the frequency and severity of crashes: seat belt non-use, distracted driving, alcohol-impaired driving, and speeding. Table 10 presents average employer costs per nonfatal crash injury for selected crash circumstances, shown separately for on-the-job and off-the-job incidents.

Some values in the table are also presented on a per-occupant basis. These figures reflect the average cost distributed across all vehicle occupants involved in a crash, including those who were not injured. As a result, per-occupant costs are lower than per-injury costs.

Costs per injury were highest for alcohol-related crashes and for unrestrained occupants.

The employer's cost per traffic fatality, as well as the cost per property damage only crash, was the same regardless of whether one of these risk factors caused the crash.

Table 10. Costs to Employers per Nonfatal Injury in 2023 by Crash Circumstances and Whether On-the-Job (including per-occupant comparisons, in 2024 dollars)		
	Highway Crash Injury	
	On-the-job	Off-the-job
Any Person Injured	102,402	8,381
Any Occupant	35,675	9,440
Unbelted	38,718	10,670
Belted	35,124	9,213
In Distracted Driving Crash	101,073	7,835
In Speed-Related Crash	103,712	9,279
In Alcohol-Related Crash	182,216	23,262
Note: Per-occupant cost estimates include both injured and non-injured occupants involved in the crash. Differences between per-injury and per-occupant values reflect variation in the number of occupants per crash.		

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Costs to Employers of Crashes by State

Table 11 details employer costs of motor vehicle crash injuries, on- and off-the-job, by state. Costs exceeded \$4.8 billion in each of the nation's three most populous states—California, Florida, and Texas.

Costs per employee varied widely by state. They were highest in Connecticut, Mississippi, Florida, Louisiana, and North Carolina. They were lowest in Wyoming, Oklahoma, Minnesota, Iowa, New York, and North and South Dakota. Differences in injury severity, age of workforce, regional and local characteristics, and completeness of reporting contributed to the variance. Critically, the methods for calculating state costs (documented in the Appendix) ignore differences in nonfatal injury severity between states. This weakness probably produces cost estimates that are too low in rural states relative to urban states because urban states typically have lower average speeds and consequently less severe injuries.

Differences in labor force participation rates and family size between states may have caused employer costs per employee to vary even if safety levels and prices were equal. Cost differences between states may reflect price and income variations more than differences in safety. Finally, differences between states may result from differing completeness of reporting of occupational or crash injuries rather than actual differences in injury rates.

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Table 11. Costs to Employers of On- and Off-the-Job Motor Vehicle Crash Injuries in 2023 by Expense Category by State* (in millions of 2024 dollars)									
State	EXPENSE CATEGORY		TOTAL	Per Employee	State	EXPENSE CATEGORY		TOTAL	Per Employee
	Health Fringe	Non Fringe				Health Fringe	Non Fringe		
USA	28,037	33,634	61,671	430	MS	415	381	796	680
AK	92	76	168	490	MT	123	107	230	470
AL	416	391	807	400	NC	1,299	1,195	2,494	580
AR	358	338	696	570	ND	54	46	100	260
AZ	666	622	1,288	460	NE	146	134	280	280
CA	2,839	2,734	5,573	330	NH	136	125	261	370
CO	473	447	920	360	NJ	608	595	1,203	290
CT	800	767	1,567	910	NM	227	203	430	500
DC	81	86	167	490	NV	238	227	465	380
DE	94	89	183	440	NY	1,126	1,051	2,177	240
FL	2,894	2,848	5,742	660	OH	803	759	1,562	290
GA	1,096	1,027	2,123	480	OK	158	135	293	170
HI	114	108	222	360	OR	461	419	880	500
IA	189	173	362	230	PA	759	734	1,493	250
ID	159	129	288	400	RI	70	63	133	260
IL	1,025	979	2,004	340	SC	417	373	790	390
IN	404	373	777	260	SD	60	53	113	260
KS	229	208	437	310	TN	584	552	1,136	400
KY	344	318	662	350	TX	2,490	2,391	4,881	410
LA	624	579	1,203	610	UT	295	284	579	430
MA	524	507	1,031	320	VA	753	730	1,483	370
MD	477	484	961	330	VT	79	72	151	450
ME	123	110	233	350	WA	493	464	957	300
MI	779	741	1,520	350	WI	394	353	747	260
MN	289	270	559	200	WV	163	149	312	420
MO	558	515	1,073	380	WY	38	29	67	230
* Excludes \$7,091 million for crashes involving property damage only.									

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Table 12 provides estimates of employer costs of injuries in alcohol-involved motor vehicle crashes by state. These estimates account for regional differences in alcohol-impaired driving. They were obtained by assuming that the ratio between employers' costs of alcohol use and fatalities involving Blood Alcohol Levels at or above .08 remains the same across the states.

Table 12. Costs to Employers of Alcohol-Involved Motor Vehicle Crashes by State in 2023 (in millions of 2024 dollars)			
STATE	TOTAL COST	STATE	TOTAL COST
USA	11,681	Missouri	249
Alabama	219	Montana	66
Alaska	17	Nebraska	65
Arizona	385	Nevada	110
Arkansas	122	New Hampshire	39
California	1,495	New Jersey	155
Colorado	227	New Mexico	97
Connecticut	133	New York	363
Delaware	36	North Carolina	370
District of Columbia	17	North Dakota	39
Florida	795	Ohio	391
Georgia	371	Oklahoma	151
Hawaii	37	Oregon	196
Idaho	57	Pennsylvania	300
Illinois	391	Rhode Island	24
Indiana	215	South Carolina	347
Iowa	125	South Dakota	37
Kansas	112	Tennessee	317
Kentucky	158	Texas	1,548
Louisiana	193	Utah	52
Maine	35	Vermont	17
Maryland	170	Virginia	259
Massachusetts	136	Washington	324
Michigan	245	West Virginia	46
Minnesota	100	Wisconsin	170
Mississippi	115	Wyoming	37

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Costs to Employers of Crashes by Industry

Employer costs of on-the-job motor vehicle crashes by industry are shown in Table 13. As expected, costs per employee were higher for industries where motor vehicles are used intensively and exposure to risk is greater. Costs per employee were highest in the transit; trucking; waste management; and stone, clay, glass, and concrete manufacturing industries. Costs were assigned by vehicle type involved in the crash. Heavier vehicles have smaller fatality costs but higher property damage costs. The Survey of Occupational Injuries and Illnesses obtained reports on less than 25% of survivors of on-the-road occupational crashes with work loss. The reported cases were used to infer the distribution of unreported cases. Thus, cost variations between industries should be compared cautiously. They may result from differing completeness of reporting.

Table 13. Costs to Employer of On-The-Job Motor Vehicle Crashes by Industry in 2023* (in 2024 dollars)				
Industry	Health-Related Fringe	Non-Fringe	All Private & Public Industries	Cost/Employee
Agriculture, Fishing & Hunting	141,121,215	594,266,490	735,387,705	321
Forestry & Logging	8,919,343	37,589,246	46,508,589	378
Mining	38,878,531	163,985,044	202,863,575	340
Metal Mining	1,198,611	5,198,202	6,396,813	178
Coal Mining	804,886	3,516,701	4,321,587	120
Oil & Gas Extraction	2,032,321	8,591,683	10,624,004	156
Nonmetallic Minerals	3,085,150	12,982,789	16,067,939	194
Support Activities for Mining	31,757,563	133,695,669	165,453,232	438
Construction	344,548,153	1,896,830,745	2,241,378,898	197
General Building Contractors	30,901,790	130,145,442	161,047,232	88
Heavy Construction	104,052,412	526,469,842	630,522,254	551
Special Trades Contractors	202,215,310	1,235,354,060	1,437,569,370	279
Manufacturing	125,375,633	677,039,883	802,415,516	53
Food & Kindred Products	29,949,148	171,896,278	201,845,426	94
Textile Mill Products	1,143,728	5,019,833	6,163,561	13
Lumber & Wood Products	5,338,849	23,000,214	28,339,063	69
Printing & Publishing	3,295,148	23,502,451	26,797,599	59
Stone, Clay, Glass & Concrete	32,445,582	212,506,498	244,952,080	738
Primary Metal Industries	1,802,095	12,848,499	14,650,594	30
Fabricated Metal Products	12,131,717	75,684,758	87,816,475	80
Industrial Machinery & Equipment	9,619,573	42,032,461	51,652,034	43
Transportation Equipment	13,978,809	99,939,677	113,918,486	45

(Table 13 continued on next page)

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Table 13 – Continued

Industry	Health-Related Fringe	Non-Fringe	All Private & Public Industries	Costs/Employee
Transportation, Warehousing & Public Utilities	885,029,590	4,559,708,816	5,444,738,406	623
Trucking	544,457,365	2,292,623,844	2,837,081,209	1,439
Transit	97,173,530	683,345,683	780,519,213	1,855
Couriers and Messengers	94,372,502	648,507,588	742,880,090	545
Air, Rail and Water	14,886,482	123,860,082	138,746,564	155
Support Activities for Transportation	66,409,811	341,967,637	408,377,448	542
Utilities	23,510,975	147,602,939	171,113,914	168
Warehousing	43,883,531	321,580,071	365,463,602	343
Wholesale Trade	173,574,956	1,181,216,428	1,354,791,384	429
Retail Trade	131,125,502	1,000,799,932	1,131,925,434	70
General Merchandise Stores	3,490,412	17,089,456	20,579,868	10
Building Material & Garden Equipment/Supplies Dealers	13,982,180	115,869,382	129,851,562	119
Food Stores	3,299,895	27,345,240	30,645,135	10
Motor Vehicle and Parts Dealers	63,432,425	495,298,954	558,731,379	305
Miscellaneous Store Retailers	11,494,999	83,086,790	94,581,789	165
Furniture & Home Furnishings	5,670,037	36,301,706	41,971,743	35
Sporting Goods, Hobby, Musical Instrument & Book Stores	1,291,342	6,823,604	8,114,946	14
Non-store retailers	14,406,978	108,754,356	123,161,334	113
Gasoline Stations	14,039,797	110,076,746	124,116,543	258
Services	941,296,258	6,642,608,317	7,583,904,575	97
Finance & Insurance	12,264,235	80,749,406	93,013,641	12
Real Estate & Rental	45,070,260	338,005,008	383,075,268	121
Information Services	37,297,374	251,255,508	288,552,882	107
Accommodations	6,839,320	42,049,424	48,888,744	40
Eating & Drinking Places	28,367,622	181,662,228	210,029,850	23
Personal services	22,338,082	143,559,358	165,897,440	64
Religious, Civic & Professional Organizations	16,366,448	96,393,220	112,759,668	56
Professional, Scientific & Technical Services	42,929,525	300,899,962	343,829,487	26
Automotive Repair	48,523,790	363,887,164	412,410,954	183
Arts, Entertainment & Recreation	21,783,464	91,714,048	113,497,512	37
Health Services	267,309,624	2,227,633,070	2,494,942,694	116
Svcs to Bldgs/Dwellings (e.g., lawn, cleaning)	151,696,467	950,074,295	1,101,770,762	351
Other Admin & Support Svcs (e.g., security)	102,307,013	692,985,092	795,292,105	264
Waste Management & Remediation Services	57,995,226	353,915,496	411,910,722	795
Educational Services	23,033,480	143,306,471	166,339,951	20
Membership Organizations	14,188,905	83,581,777	97,770,682	48
Engineering & Management	42,929,525	300,899,962	343,829,487	183
Government	957,017,595	7,714,845,901	8,671,863,496	401
Federal Government	127,513,179	1,013,636,396	1,141,149,575	566
State Governments	174,803,681	1,392,638,494	1,567,442,175	290
Local Government	654,459,703	5,308,269,998	5,962,729,701	420
TOTAL	3,746,886,776	24,468,890,802	28,215,777,578	5,225

* Excludes \$7,091 million for crashes involving property damage only.

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Conclusions

Including insurance expenses, employer health care (medical) spending for motor vehicle crashes totaled \$11 billion in 2023 (in 2024 dollars). Employers spent another \$17 billion on sick leave and life and disability insurance for crash victims.

Protecting employees from motor vehicle crash injury can be a profitable investment of time and resources. Alcohol-impaired driving crashes cost employers **\$12 billion** and injuries to unrestrained occupants cost employers **\$6 billion** in 2023. Employer costs of distracted driving and speed-related crashes are **\$16 billion** and **\$7 billion**, respectively.

Fleet safety programs are a viable alternative for employers to reduce and control costs associated with vehicle crashes without reducing the benefits offered to employees. Information on how to develop a fleet safety program can be found in *NETS' Comprehensive Guide to Road Safety™*. Additional safe driving resources can also be found in NETS' Drive Safely Work Week™ Campaign archives. All of these resources, along with *NETS' Guide to Defensive Driver Training™* and *NETS' Recommended Road Safety Best Practices™*, are available for download at no cost from NETS' website, www.trafficsafety.org.

Finally, the large employer costs due to off-the-job crashes suggest that employers can influence safe driving within the community by implementing “work-life programs” in the workplace, which in turn provides safe driving information and resources to employees' families and community members. Employers may also see a reduction in off-the-job crashes and therefore costs through promotion and support of safe driving measures within the community such as graduated licensing for youth, booster seat, bicycle helmet, and primary safety belt laws, plus enforcement efforts like intensive sobriety checkpoints and reducing service to over-the-limit and underage drinkers.

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Appendix

Incidence Estimation

In general, the computations used the peer-reviewed methods in Zaloshnja and Miller (2006). Both fatal and nonfatal motor vehicle crash injuries were estimated nationwide and then by state and by industry.

The nationwide fatality estimation used two data sets: the National Highway Traffic Safety Administration's (NHTSA's) 2022 Fatality Analysis Reporting System (FARS) and the U.S. Bureau of Labor Statistics' (BLS') 2022 Census of Fatal Occupational Injuries (CFOI), Occupational Injuries and Illnesses and Fatal Injuries Profiles, Fatal Injuries Numbers (2011-2022) (<https://data.bls.gov/gqt/InitialPage>). It sums four counts: (1) 1,384 occupant fatalities on public roads from CFOI, (2) 183 non-occupant fatalities on public roads from FARS that were coded as "at work," (3) 185 occupant fatalities not on public roads from CFOI, and (4) 128 non-occupant fatalities not on public roads (325 pedestrian vehicular fatalities from CFOI -183 non-occupant fatalities at work on public roads from FARS). As a check, the FARS-based estimate of 1,376 occupant fatalities on public roads is within one percent of the count of 1,384 from CFOI. That estimate included all occupant fatalities coded as "at work" and 80% of fatalities of other occupants of large trucks.

Occupational crash fatalities by state are the average annual FARS counts of occupants and non-occupants killed at work during 2019-2023 adjusted upward to the 2022 CFOI totals including deaths not on public roads. Off-the-job motor vehicle-related fatalities were computed by subtracting the state occupational highway fatality estimates from the 2022-2023 FARS state totals under age 65. The calculations assumed that the number of people over age 65 equaled the number of people who were not workers or dependents of workers.

The number of nonfatal occupational motor vehicle injuries was computed using: States' most recent reports of crash statistics; purchased 2018 Insurance Services Office summary data; *The Insurance Fact Book, 2021* (Insurance Information Institute, 2021); and the 2022 CFOI ratio of crash deaths on versus off public roads;

The number of injured on-the-job motor vehicle crash survivors by state was computed in four stages. The computation started with an internet search that yielded counts for 33 states and the District of Columbia of people non-fatally-injured in on-the-road crashes during at least one year between 2020 and 2023. All states except Montana that lacked nonfatal injury counts had counts of serious injuries. In those cases, a linear regression model was used to predict the injury counts in 16 states from their death and serious injury counts. The regression used data from 22 states that counted both injuries and serious injuries. Police counts of injuries or crashes were not available online for Montana; its nonfatal injury count was estimated with a linear regression

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predicting injuries from deaths. Regressions predicting injuries from deaths in New Hampshire and Vermont indicated that a regression restricted to eight small rural states was the best choice. The state injury counts were then rectified to match the national total from NHTSA's *2023 Traffic Safety Facts Annual Report*, and adjusted using multipliers from Blincoe et al. (2023) to account for inaccuracies in police injury coding and under-reporting of injury crashes to police. From these injury counts and FARS fatality counts, the number of injured crash survivors per crash fatality by state was computed.

Next, the counts were multiplied by the 6.2% of people under age 65 who are injured at work among those injured in crashes (137,691/2,208,363). The 137,691 estimate was computed as 30.9% of occupants injured in large truck crashes multiplied by 323,611 occupants injured in commercial crashes in 2022 (based on ISO 2018 data adjusted to 2022 using Table 36 in *Traffic Safety Facts Annual Report, 2022*), multiplied by 1.38 people injured per police-reported injury crash (Blincoe et al., 2023).

The 2,208,363 count was adjusted to 2023 from the 2019 count in Blincoe et al. (2023) using the trend in NHTSA police-reported nonfatal injury crash counts. Finally, the counts were divided by the percentage of occupational crash fatalities occurring on public roads. This calculation assumes that the CFOI percentage of occupational crash fatalities occurring on public roads (89%) does not vary by state.

To distribute the injured survivors of on-the-job crashes by industry, the Bureau of Labor Statistics' Survey of Occupational Injury and Illness (SOII) distribution of survivors of lost-workday occupational injuries by North American Industry Classification System (NAICS) code was used. The SOII data by source (e.g., motor vehicle) exclude medically treated survivors without workdays lost or on restricted duty, whom the 1987-1992 National Health Interview Survey estimated were 47% of the total (Zaloshnja and Miller, 2006). They also do not cover all workers. Notably, they exclude self-employed truck and taxi drivers. For that reason, the industry counts were assigned as the larger of the SOII count or the CFOI count times the all-industry average of people injured to people killed in occupational motor vehicle crashes. The resulting nonfatal counts by industry then were rectified to the 137,691 total nonfatal injuries on public roads and a matching proportion of injuries off public roads.

Cost Estimation

Medical, productivity, emergency services, property damage, legal, and non-liability insurance claims processing costs came from Blincoe et al. (2023). These costs were inflated from 2019 to 2024 dollars using the employment cost index and consumer price index — all items and medical care. Employer crash costs were adjusted to specific states using ratios of state to national costs. The all-items price adjusters used were the Bureau of Labor Statistics 2023 Regional Price Parity adjusters by state. The medical price adjusters were aggregated to the state level from the Council for Community and Economic Research's *CCER Cost of Living Index* values for 2014 for medical care built

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from data on participating metropolitan areas. The wage adjusters used were computed by dividing 2023 Bureau of Economic Analysis per capita income by state by corresponding Census Bureau population estimates. Future costs were converted to present value using a 3% discount rate. The calculations assume that costs per nonfatal motor vehicle injury on and off public roads are equal. Costs related to crash-caused traffic delays of commercial vehicles or employees not involved in crashes were excluded from the cost estimates.

Total employer health-related fringe benefit costs were computed following the methods in Miller (1992) and Zaloshnja and Miller (2006). Sources of data were as follows: sick leave, health and other insurance, and Workers' Compensation per hour worked from the 2024 National Compensation Survey (Bureau of Labor Statistics), National Academy of Social Insurance (2024), and 2024 Life Insurance Fact Book (American Council of Life Insurance). The tax payments shown assume, perhaps optimistically, that police, fire, and emergency medical services would require fewer vehicles and staffing if crashes were eliminated. Liability payments per on-the-job crash were estimated from 2018 Insurance Services Office data, rectified to match the \$17.8 billion total commercial liability claims costs for 2018 (Insurance Information Institute, 2021), then advanced to 2023 by adjusting for inflation and crash incidence changes.

Prior to 2015, NETS reports on cost of crashes included wage-risk premiums which measure the extra wages workers demand when accepting jobs with high risks of death in road crashes or other circumstances. This concept was abstract and the costs were not linked to individual crashes. Therefore, those costs were dropped from the 2020 and current reports except to the extent they affect liability insurance payments.

Employer costs of speed-related, distracted driving, and alcohol-involved motor vehicle crashes were estimated by applying payer estimates by cost category to incidence and cost information by injury severity in Blincoe et al. (2023), along with 2023 counts tabulated from FARS. A similar approach was taken on restraint nonuse, except that the incidence calculations also used NHTSA estimates of persons saved by belts. The percentage of each type of crash that was on-the-job came from 2023 FARS data. Employer costs of alcohol-involved injuries by state (Table 12) were allocated in proportion to alcohol-involved fatalities. This procedure assumed the percentage of impaired driving that was on the job did not vary between states.

The number of employees and crash fatality and injury risks by industry came from the 2022 CFOI and 2021-2022 SOII.

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